

## ABSTRACT OF THE DISCLOSURE

A communications system that comprises a channel encoder for encoding a plurality of information bits, a mapping unit coupled to the channel encoder for mapping the plurality of information bits into a first set of quadrature phase shift keying (QPSK) symbols and a second set of QPSK symbols, wherein every successive predetermined number of information bits are mapped to a first QPSK symbol and a second QPSK symbol in one symbol period in accordance with a mapping table, a first modulation unit coupled to the mapping unit for converting the first QPSK symbol into a first QPSK constellation symbol, and a second modulation coupled to the mapping unit for converting the second QPSK symbol into a second QPSK constellation symbol.

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